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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,630	10/17/2003	Teruaki Itoh	160-393 (AMK)	8905
23117	7590.	03/16/2007	EXAMINER	
NIXON & VANDERHYE, PC			ROSARIO, DENNIS	
901 NORTH GLEBE ROAD, 11TH FLOOR			ART UNIT	PAPER NUMBER
ARLINGTON, VA 22203			2624	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/686,630	ITOH, TERUAKI	
	Examiner	Art Unit	
	Dennis Rosario	2624	

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on Rest. Req. 3/6/07.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3 and 5 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3 and 5 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 December 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/17/03 2/7/06
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 2,4 and 6 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species II, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 3/6/07.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajiura et al. (US Patent 4,912,318 A1) in view of Bibbero (US Patent 3,202,761 A1).

Regarding claim 1, Kajiura teaches a test tube type discrimination apparatus comprising:

a) first and second electronic cameras (fig. 1,numerals 12a and 12b) which pick up images of a plurality of test tubes (fig. 1,num. 1) held in a test tube rack (fig. 1,num. 2) one by one, the first electronic camera (fig. 1,num. 12a) picking up an image from an opening (fig. 4b,num 1 and fig. 6,num. 1) of each of the test tubes and the second electronic camera (fig. 4A,num. 12a) picking up an image from a side (fig. 4A,num. 1) thereof;

- b) a pattern recognition unit (fig. 1,num. 22) which receives data of the images picked up by the first and second electronic cameras and extracts an edge (as shown in fig. 10B as a wave form) of each of the images to recognize a test tube pattern of each of the test tubes including opening and side patterns of each of the test tubes;
- c) a standard pattern memory which stores the opening and side patterns of the test tubes as standard patterns; and
- d) a comparison determination unit which compares the test tube pattern recognized by the pattern recognition unit and the standard patterns of the test tubes stored in the standard pattern memory to determine a type of each of the test tubes.

Kajiura does not teach paragraphs c) and d) but does teach that fig. 1,num. 22 performs image processing to obtain the waveform of fig. 10B from image 10A. However, Kajiura's teaching of image processing does not show how the image of fig. 10B is obtained to perform pattern recognition. Thus, Kajiura suggest to one of ordinary skill in the art that fig. 1,num. 22 has untaught components that transform the image of fig. 10A to the waveform of fig. 10B that enable pattern recognition.

Bibbero teaches the remaining components as shown in fig. 1 that enables pattern recognition and the remaining limitation of paragraphs c) and d):

- c) a standard pattern memory (fig. 1,num 12) which stores patterns of test tubes (as shown in fig. 6,num. 55) as standard patterns; and

d) a comparison determination unit (fig. 9, COMPARISON(DISTANCE DETERMINATION) which compares the test tube pattern recognized by the pattern recognition unit and the standard patterns of the test tubes stored in the standard pattern memory to determine a type (as done in fig. 6,num. 64) of each of the test tubes.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Kajiura's teaching of fig. 1,num. 22 with Bibbero's teaching of fig. 1, because Bibbero's teaching enables a "corrective measure [to be performed without] a human operator" in col. 7, lines 65-67 such as sorting as done in Kajiura's fig. 1,num. 24: SORTING DEVICE.

Regarding claim 3, Kajiura of the combination teaches the test tube type discrimination apparatus according to claim 1, wherein the first and second electronic cameras each employ a CCD (or "line sensor cameras" in col. 4, line 5) as an image pickup device.

Claim 5 is rejected the same as claim 1, last paragraph. Thus, argument similar to that presented above for claim 1, last paragraph is equally applicable to claim 5.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nguyen et al. (US Patent 4,914,289 A1) is pertinent as teaching a method of imaging the tops and sides of bottles as shown in fig. 1.

Fitzmorris et al. (US Patent 4,691,231 A1) is pertinent for the same reasons as Nguyen et al. (see fig. 10A).

Garfunkel et al. (US Patent 4,244,650 A1) is pertinent as teaching a method of sorting bottles as shown in fig. 1.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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